

Amendments to the Specification:

Please replace paragraph [0014] with the following amended paragraph:

[0014] FIGS. 8-10 are enlarged side views of a segment of a ball cage according to other embodiments of the present invention;

Please replace paragraph [0025] with the following amended paragraph:

[0025] FIGS. 10-12 illustrate arrangements for resonating and damping cage vibrations according to further embodiments of the present invention. FIG. 10 is an enlarged side view of segment 60 of ball cage 42' (similar to cage 42 but without segments 46), FIG. 11 is a cross-sectional view similar to FIG. 7 of segment 64 of cage 42' and FIG. 12 is a perspective view of cage 42'. FIG. 10 illustrates a situation where the distributed mass provided by segmented ring 46 is replaced by one or more discrete mass elements 62. In this example, discrete mass elements 62 are shown as being disk-shaped, e.g., like hockey pucks, but this is merely for convenience of description and not intended to be limiting. Mass elements 62 may have any convenient shape. Further, while mass elements 62 are illustrated as each being suspended by single spring 48, 54 any number of springs and any desired combination of different spring types may also be used, depending upon the needs of the user and the desired degrees of vibrational freedom. For example, the combination of spring 48 and mass 62 (hereafter spring-mass combination 48, 62) is capable of vibration in X, Y, Z and Φ directions. Spring-mass combination 54, 62 is capable of vibration in X, Y and Φ directions if spring 54 has a circular cross-section and one translational direction (X or Y) if spring 54 is a flat leaf-type spring, but not in the Z direction (perpendicular to the surface of cage 42' on which spring 54 is mounted). While spring mass combinations 48, 62 and 54, 62 are shown in FIG. 10 as being adjacent, this is merely for convenience of illustration and not intended to be limiting or imply that such proximity is necessarily desirable. The spacing and location of such spring-mass combinations will be chosen by the designer depending upon the vibration modes to be resonated. FIG. 11 is a view similar to FIG. 7 but for an alternative placement of spring-mass combination 54, 62 (or

48, 62). In FIG. 11, spring-mass combination 54, 62 extends from side face 65 of cage 42. This allows further control over the vibrational degrees of freedom and direction of vibration of resonant elements 54, 62 (or 48, 62). FIG. 12 is a perspective view of ball bearing cage 42' incorporating spring-mass elements ~~54-62~~ 54, 62 (or 48, 62) illustrated in FIGS. 10-11.

Please replace paragraph [0026] with the following amended paragraph:

[0026] FIG. 13 is side view and FIG. 14 is a simplified cross-sectional view of self-contained tuned mass damper (TMD) 80 suitable for use with a bearing cage of the present invention to damp out the vibrations thereof. Tuned mass dampers (TMDs) are known in the art and described in commonly assigned U. S. Patents 5,816,373 and 5,873,438 to Osterberg et al, which are incorporated herein by reference. The illustrations in FIGS. 13-14 and the description thereof that follows here are simplified and reference should be had to the above-noted patents for further internal design features. TMD 80 has outer shell 84 closed by end caps 86, 88. Threads 90 are conveniently provided for attaching TMD 80 to a bearing cage. However, threads 90 are not essential and illustration thereof is not intended to be limiting. Any suitable means of attaching tuned mass dampers 80 to bearing cages may be used. TMD 80 has therein mass ~~[[82]]~~ 81 suspended between springs 94, 96 that are retained by end caps 88, 86 respectively. Mass ~~[[82]]~~ 81 is free to move in the direction of arrows 95. Spaces 97, 99 within outer shell 84 and in and around mass ~~[[82]]~~ 81 are filled with damping fluid ~~[[100]]~~ 93. Either liquids or gases may be used for damping fluid ~~[[100]]~~ 93.

Amendments to the Drawings:

The attached sheets of drawings include changes to FIGS. 1A, 1B, 2, 14, 16, and 17. In particular, FIGS. 1A, 1B and 2 on drawings sheets 1 and 2 are amended to add the words "PRIOR ART" adjacent the figure numbers; FIG. 14 on drawing sheet 6 is amended to change one instance of reference numeral "82" to --81-- and to change three instances of reference number "100" to --93--; FIG. 16 on drawing sheet 8 is amended to delete reference numbers "104" and "106" and accompanying arrows; and FIG. 17 on drawing sheet 9 is amended to delete reference number "90" and accompanying arrow.

Attachment: Replacement Sheet
Annotated Sheet Showing Changes